

ART. V.—CONTRIBUTIONS TO ENCEPHALIC
ANATOMY.

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PART IX.

The objects and methods of a study of the Ichthyopsidean brain.

THE inquiries of a pupil, as well as of a fellow investigator residing at a distance from myself, having led me to commit some hints on the above subjects to paper, I have, thinking that these possibly might become of value to some one or other reader of the JOURNAL OF NERVOUS AND MENTAL DISEASE, submitted them to the editors of this quarterly.

Inasmuch as Huxley's class of the Ichthyopsida contains the lowest of the living vertebrate forms, it would appear one of the most important undertakings for the cerebral anatomist to determine the structural relations of the brain, spinal cord and principal nerves in that class. In fact, *a priori*, the student might conclude that the anatomy of a simple brain like that of the fish would represent a sort of rough and rudimentary sketch of the fundamental features of the higher mammalian brain, and that for this reason alone, its study would be essential to the human anatomist.

Nothing could be more erroneous!

Any one familiar with the visceral and osteological anatomy of the fish tribes will bear me out in the statement, that however convenient it may be to pigeon-hole the Amphibia, Elasmobranchi, Teliosts, Ganoids, Dipnoi, and Marsipobranchi in one great class, on the strength of the formal common character, that they have no amnion at the embryonic period, and always have gills at some time of or throughout life,* that there are

* These are the only constant characters, separating them from other groups, and it is even doubtful whether we are justified in denying the existence of the morphological representative of the amnion in all the anamnia.

1874. (For comparative purposes regarding the epiphysis and hypophysis cerebri.)

The older works of Stannius, Owen and Cuvier, as well as most of the text-books now in use will prove of little avail, and the investigator will economize time and labor by ignoring them altogether. Huxley's comparative anatomy of vertebrates contains the best of the brief accounts, and is very suggestive in its homology of the cranial nerves. The more recent volumes of the different Archives and Proceedings of Societies will also be found to contain a great deal not referred to in the list of the literary references above given. Notably important among these, both in description and methods, are the articles of Calberla on the lamprey.
